

CLAIMS

1 1. A method for integrating rework operations into a
2 planning process comprising:
3 providing at least one rework Bill of Materials flow
4 for use in conjunction with other Bills of Materials flow in
5 a production planning process;
6 forecasting rework parametric information associated
7 with said at least one rework Bill of Materials flow; said
8 rework parametric information including at least one of:
9 yields;
10 cycle times;
11 capacities; and
12 rework materials; and
13 generating an integrated manufacturing plan utilizing
14 said rework parametric information and said at least one
15 rework Bill of Materials flow.

1 2. The method of claim 1, further comprising:
2 balancing capacity constraints for said at least one
3 rework Bill of Materials with capacity constraints for said
4 other Bills of Materials flow.

1 3. The method of claim 2, further comprising a rework
2 process, said rework process comprising:
3 executing said integrated manufacturing plan wherein
4 said rework parametric information for materials not
5 consumed during execution but determined to be reworkable
6 are fed back into a second rework Bill of Materials flow
7 operable for being consumed in a new integrated
8 manufacturing plan.

1 4. The method of claim 1, wherein said yields include:
2 a percentage of product determined to have successfully
3 passed testing.

1 5. The method of claim 1, wherein said cycle time includes:
2 an amount of time required to rework a product
3 including wait time.

1 6. The method of claim 1, wherein said rework materials
2 define materials created during a rework process.

1 7. The method of claim 1, wherein said integrated
2 manufacturing plan is executed via a linear programming
3 application.

1 8. A storage medium encoded with machine-readable computer
2 program code for integrating rework operations into a
3 planning process, said storage medium including instructions
4 for causing a computer to implement a method comprising:
5 providing at least one rework Bill of Materials flow
6 for use in conjunction with other Bills of Materials flow in
7 a production planning process;
8 forecasting rework parametric information associated
9 with said at least one rework Bill of Materials flow; said
10 rework parametric information including at least one of:
11 yields;
12 cycle times;
13 capacities; and
14 rework materials; and
15 generating an integrated manufacturing plan utilizing
16 said rework parametric information and said at least one
17 rework Bill of Materials flow.

- 1 9. The storage medium of claim 8, further comprising
2 instructions for causing said computer to implement:
3 balancing capacity constraints for said at least one
4 rework Bill of Materials with capacity constraints for said
5 other Bills of Materials flow.
- 1 10. The storage medium of claim 9, further comprising
2 instructions for causing said computer to implement a rework
3 process, said rework process comprising:
4 executing said integrated manufacturing plan wherein
5 said rework parametric information for materials not
6 consumed during execution but determined to be reworkable
7 are fed back into a second rework Bill of Materials flow
8 operable for being consumed in a new integrated
9 manufacturing plan.
- 1 11. The storage medium of claim 8, wherein said yields
2 include:
3 a percentage of product determined to have successfully
4 passed testing.
- 1 12. The storage medium of claim 8, wherein said cycle time
2 includes:
3 an amount of time required to rework a product
4 including wait time.
- 1 13. The storage medium of claim 8, wherein said rework
2 materials define materials created during a rework process.
- 1 14. The storage medium of claim 8, wherein said integrated
2 manufacturing plan is executed via a linear programming
3 application.

1 15. A system for integrating rework operations into an
2 advanced planning process comprising:
3 a server executing:
4 an advanced planning system;
5 an enterprise resource planning system; and
6 a rework system;
7 a technical data repository in communication with said
8 server; and
9 rework parametric information comprising:
10 yields;
11 cycle times;
12 capacities;
13 rework materials;
14 wherein said rework system implements:
15 providing at least one rework Bill of
16 Materials flow for use in conjunction with other Bills of
17 Materials flow in a production planning process;
18 forecasting rework parametric
19 information associated with said at least one rework Bill of
20 Materials flow; and
21 generating an integrated manufacturing plan utilizing
22 said rework parametric information and said at least one
23 rework Bill of Materials flow.

1 16. The system of claim 15, wherein said rework system
2 further implements:
3 balancing capacity constraints for said at least one
4 rework Bill of Materials with capacity constraints for said
5 other Bills of Materials flow.

1 17. The system of claim 16, further comprising a rework
2 process, said rework process implementing:
3 executing said integrated manufacturing plan wherein
4 said rework parametric information for materials not
5 consumed during execution but determined to be reworkable
6 are fed back into a second rework Bill of Materials flow
7 operable for being consumed in a new integrated
8 manufacturing plan.

1 18. The system of claim 15, wherein said integrated
2 manufacturing plan is executed via a linear programming
3 application.